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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)

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Rulemaking to Amend Parts 1, 2, 21 and 25
of the Commission's Rules to Redesignate
the 27.5-29.5 GHz Frequency Band, to
Reallocate the 29.5-30.0 GHz Frequency
Band, to Establish Rules and Policies for
Local Multipoint Distribution Service and
for Fixed Satellite Services)

CC Docket No. 92-297

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COMMENTS OF THE HEWLETT-PACKARD COMPANY
FOURTH NOTICE OF PROPOSED RULEMAKING

I. INTRODUCTION

Hewlett-Packard Company ("HP") hereby submits its comments on the Federal Communications Commission's ("FCC" or "Commission") proposal to designate the 31.0 - 31.3 GHz band for local multipoint distribution services ("LMDS") in the above-mentioned proceeding. HP is a global company that manufactures some 20,000 products. The company intends to be a supplier of equipment for LMDS. HP believes that this technology has enormous potential for providing broadband interactive services to the consumer more economically and more quickly than competing wired infrastructures. However, in order to realize this potential, it is essential that there be sufficient spectrum designated for LMDS, and that the band plan enable the most cost-effective solution. The Commission has taken the first step in helping to achieve this goal in its First Report and Order, adopted on July 17, 1996. HP appreciates the efforts of

the FCC in working to find an equitable band plan that will accommodate the many potential users of the 28 GHz band and supports the band plan designated for LMDS in the First Report and Order. HP also agrees with the Commission's decision to leave open the possibility for subscriber-to-hub transmissions in the 29.1-29.25 band. HP continues to believe that reasonable sharing criteria can be established that would enable sharing this band with Iridium MSS feeder uplinks without degradation to either service, with additional analysis and testing to demonstrate results.

However, given current constraints imposed by the variety of services requiring spectrum in the 28 GHz band, HP agrees with the Commission's proposal to assign 31 GHz to LMDS as a reasonable alternative.

II. HP SUPPORTS MAKING LMDS A PRIMARY PROTECTED SERVICE IN THE 31.0-31.3 GHz BAND

Hewlett-Packard supports the Commission's proposal to make LMDS a protected use in the 31.0-31.3 GHz band. This band assignment along with the assignment of 27.5-28.35 GHz provides sufficient non-contiguous spectrum to enable interactive broadband services without the need for costly diplexers and filters in the Customer Premises Equipment ("CPE"). Lower equipment costs will translate to a wider variety of services and lower tariffs for consumers.

HP believes that the most cost effective and spectrally efficient approach to enable interactive services is to have a split spectrum assignment with sufficient band separation to provide adequate isolation between transmit and receive signals without the need for expensive diplexers and spectrally inefficient guardbands. Although the frequency separation between the 27.5-28.35 GHz band and the 31.0-31.3 GHz band is more than required and will limit antenna

alternatives, it would be nevertheless, a satisfactory solution. In view of the fact that sharing criteria could not be agreed upon for the 29.1-29.25 GHz band to enable return links in this band, the choice of the 31.0-31.3 GHz band is an acceptable alternative.

III. HP IS COMMITTED TO WORKING WITH INTERESTED PARTIES TO NEGOTIATE A MUTUALLY ACCEPTABLE SOLUTION TO ENABLE COEXISTENCE WITH OTHER 31 GHz APPLICATIONS.

Although HP supports the 31 GHz proposal as outlined by the Commission, the company is concerned about displacing existing services in the 31 GHz band. More specifically, HP is concerned about the effect on local municipalities using 31 GHz system for traffic light controls and the implications for companies that are dependent on the revenues derived from the sale of these systems. However, HP is confident that a mutually acceptable solution can be devised and the company is committed to working with those parties to expeditiously develop a solution. Since traffic control systems have a fairly low data rate requirement, HP believes that there are several alternatives, including the following:

- 1) Splitting the 31.0-31.3 GHz spectrum into two bands, one for LMDS and the other for additional 31 GHz applications.
- 2) Generate criteria for sharing all or part of the 300 MHz spectrum in such a way so as to eliminate the potential for interference.
- 3) Since traffic control systems are point-to-point and not as extensively deployed as LMDS CPEs, there may be the possibility of traffic signal control systems sharing with satellite applications in the 28 GHz band.

HP urges the Commission to move forward with this proceeding with the understanding that the affected parties will negotiate a solution for the incumbents in the 31 GHz band prior to LMDS auctions, which are expected to take place before the end of 1996 or by some date mutually agreed to by the affected parties.

IV. ADDITIONAL LICENSING OF THE 31 GHz BAND SHOULD BE CURTAILED UNTIL RESOLUTION OF THIS PROCEEDING IS COMPLETE.

The 31 GHz band is currently allocated on a primary basis to non-government fixed and mobile services. It is HP's understanding that there are relatively few license holders in the 31 GHz band. As stated above, HP is currently engaged in discussions with the parties who use the spectrum for traffic light control and coordination in order to develop an equitable band sharing plan. In order to ensure that the needs of all users are recognized HP recommends that the FCC refrain from granting any additional licenses for this band until a decision about the band's use has been made. Further licensing at this point would only create confusion in the band, and would present a further hurdle to working out a sharing plan.

Furthermore, approving additional licenses while the use of the band is pending could have a detrimental effect to the cost effectiveness of the band if speculators were allowed to hold licenses in this band.

HP understands the Commission's expressed intent to move expeditiously with this proceeding, and accordingly, believes that potential licensees should not be placed at a disadvantage by not being allowed to obtain a license for the 31 GHz band until this docket is resolved.

V. IT IS ESSENTIAL THAT THE 31 GHz BLOCK PROPOSED IN THE FOURTH NPRM AND THE 1000 MHz DESIGNATED IN THE REPORT AND ORDER BE AUCTIONED AS A SINGLE BLOCK

HP strongly supports the FCC proposal to assign the 1000 MHz in the 28 GHz band and the 31 GHz spectrum as a single block -- 850 MHz from 27.5-28.35 GHz to be used for hub-to-subscriber, subscriber-to-hub and/or hub-to-hub transmissions, the 150 MHz band from

29.1-29.25 GHz to be limited to hub-to-subscriber and/or hub-to-hub in accordance with PSAD limits specified in amendment to 47 C.F.R. Section 25.257 and the 31 GHz band to be used for subscriber-to-hub, hub-to-subscriber and/or hub-to-hub. In fact, HP believes that assigning this spectrum as a single block is critical to the success of LMDS. This spectrum assignment provides sufficient bandwidth to meet the requirements for economic deployment of LMDS systems to provide high speed data links, broadcast and interactive video services and telephony services, along with a variety of other services, to homes, businesses and schools. Anything less will result in compromises to the technical and economic viability of LMDS.

Furthermore, auctioning the LMDS bands in separate blocks would significantly lessen the value of the licenses. Interactive capabilities are essential to building the LMDS market, and without allocation of the 31 GHz band for "upstream" communications, LMDS would not reach its potential.

VI. CONCLUSION

HP strongly supports allocation of the 31 GHz band for subscriber to hub communications. The company is confident that an equitable sharing plan can be quickly achieved through negotiations with existing users of the band. Until that process is complete, additional licenses should not be granted for the 31 GHz band.

Most importantly, it is essential that the Commission auction all LMDS bands as a single block in order to preserve the technical and economic viability of this emerging new market.

Respectfully submitted,

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